

4.2.C. 0604000303 (Big Bigby Creek).

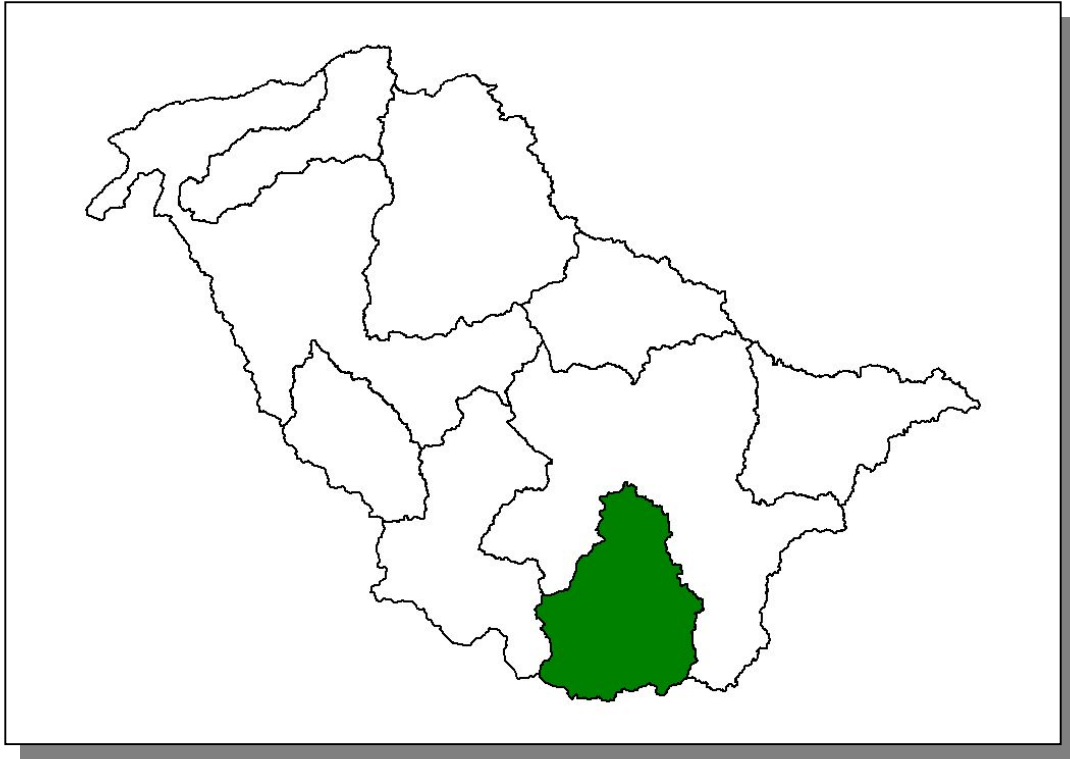


Figure 4-27. Location of Subwatershed 0604000303. All Lower Duck HUC-10 subwatershed boundaries are shown for reference.

4.2.C.i. General Description.

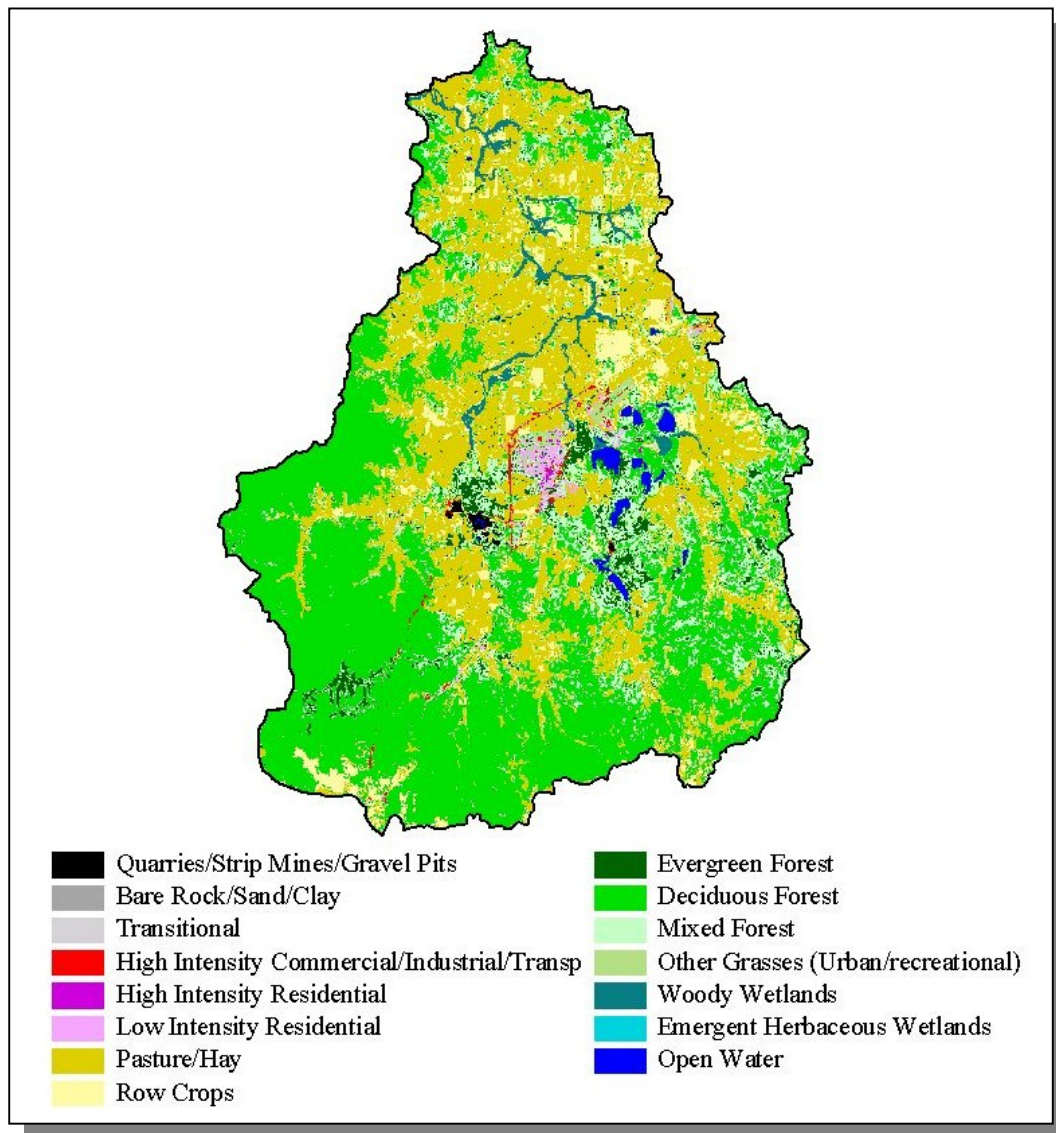


Figure 4-28. Illustration of Land Use Distribution in Subwatershed 0604000303.

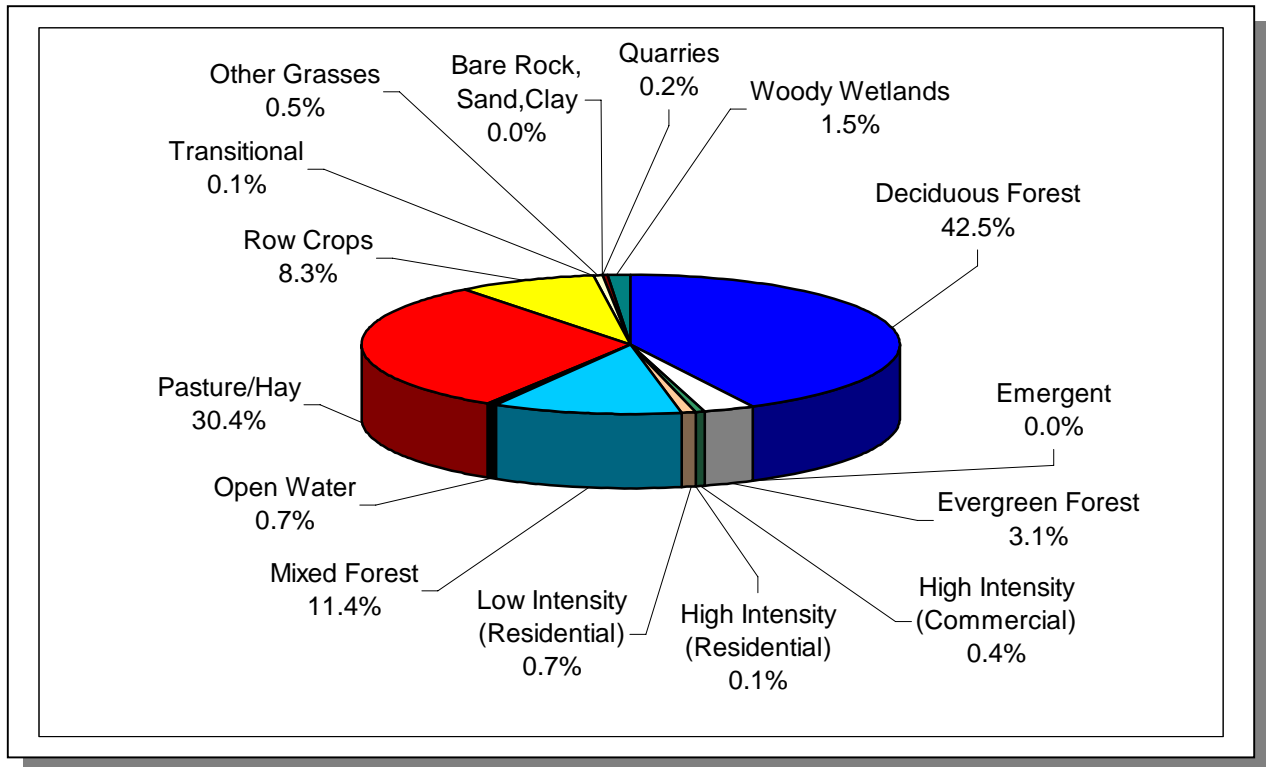


Figure 4-29. Land Use Distribution in Subwatershed 0604000303. More information is provided in Appendix IV.

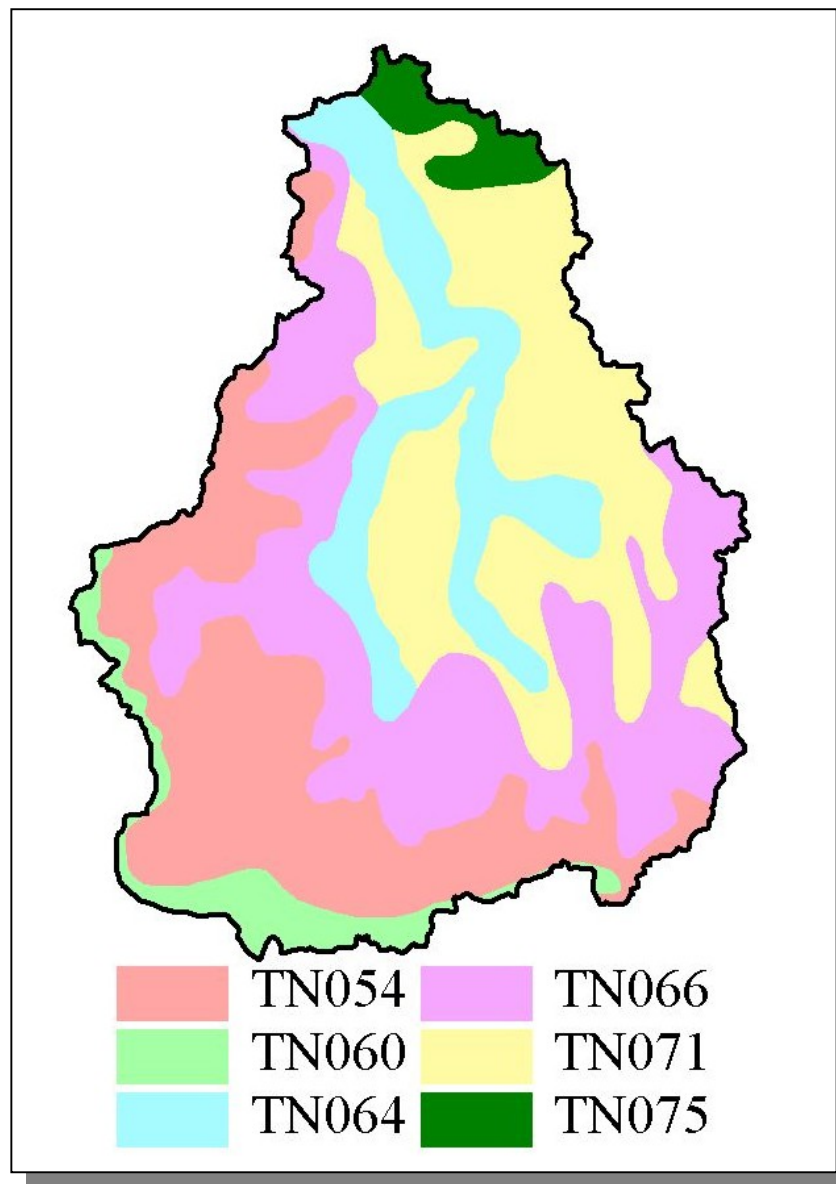


Figure 4-30. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000303.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28
TN071	0.00	C	2.37	5.70	Silty Loam	0.22
TN075	0.00	B	1.33	5.24	Loam	0.31

Table 4-11. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000303. More information is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-1997)
	1990	1997	2000		1990	1997	2000	
Giles	25,741	28,515	29,447	0.36	92	102	105	14.1
Lawrence	35,303	39,095	39,926	0.96	338	374	382	13.0
Lewis	9,247	10,789	11,367	5.81	537	626	660	22.9
Maury	54,812	68,268	69,498	17.1	9,375	11,677	11,887	26.8
Totals	125,103	146,667	150,238		10,342	12,779	13,034	26.0

Table 4-12. Population Estimates in Subwatershed 0604000303.

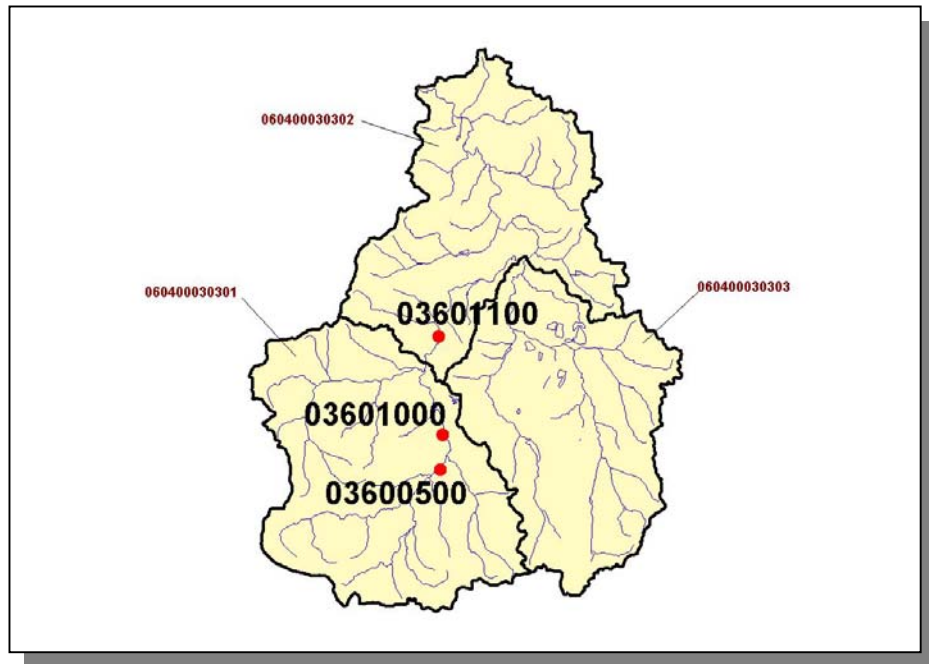


Figure 4-31. Location of Historical Streamflow Data Collection Sites in Subwatershed 0604000303. Subwatershed 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information is provided in Appendix IV.

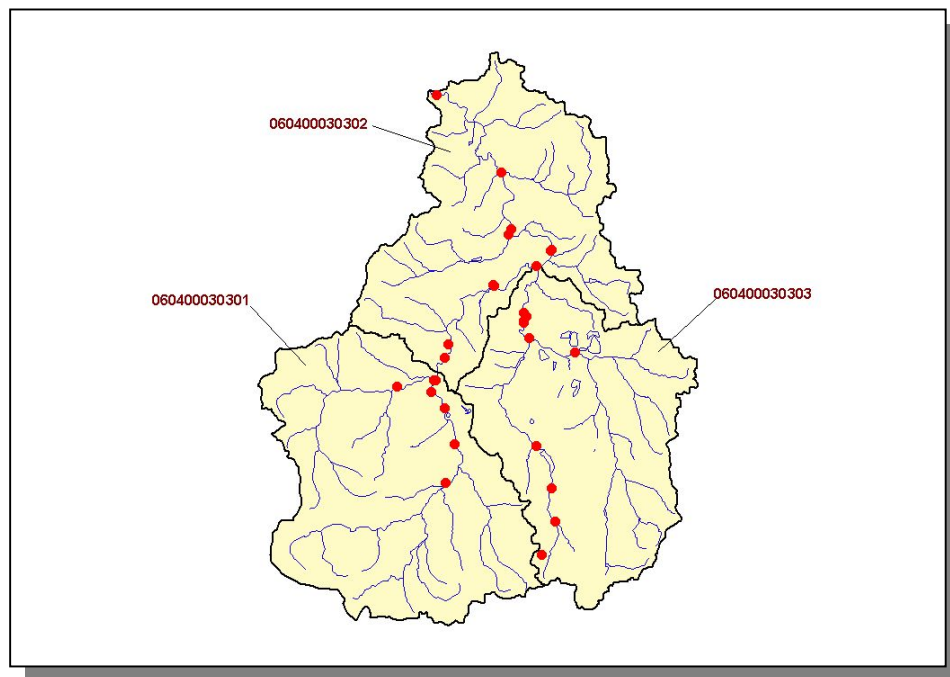


Figure 4-32. Location of STORET Monitoring Sites in Subwatershed 0604000303. Subwatershed 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including site names and locations, is provided in Appendix IV.

4.2.C.ii. Point Source Contributions.

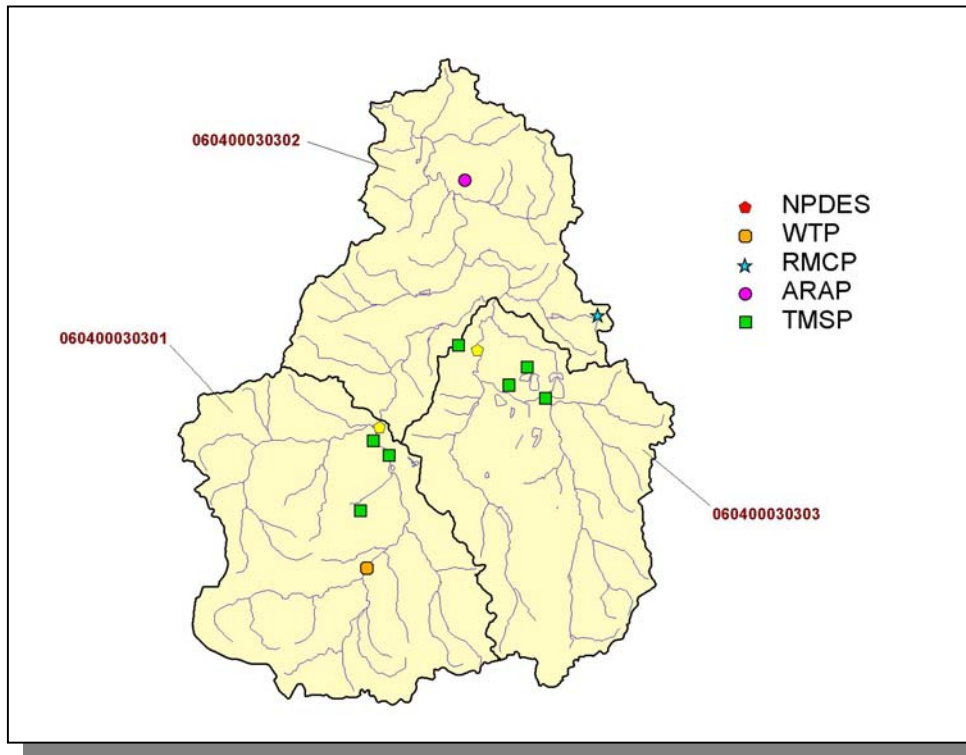


Figure 4-33. Location of Active Point Source Facilities in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

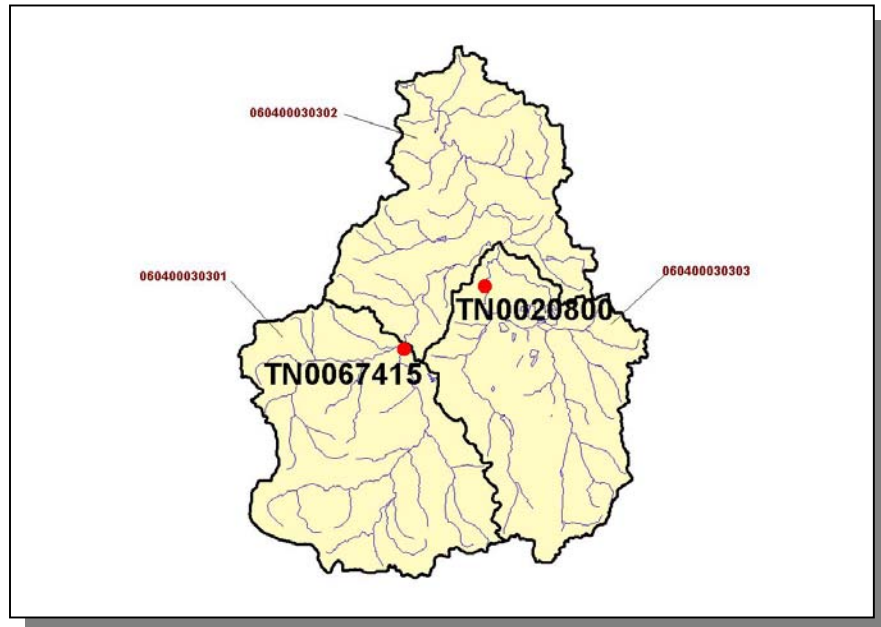


Figure 4-34. Location of NPDES Facilities in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

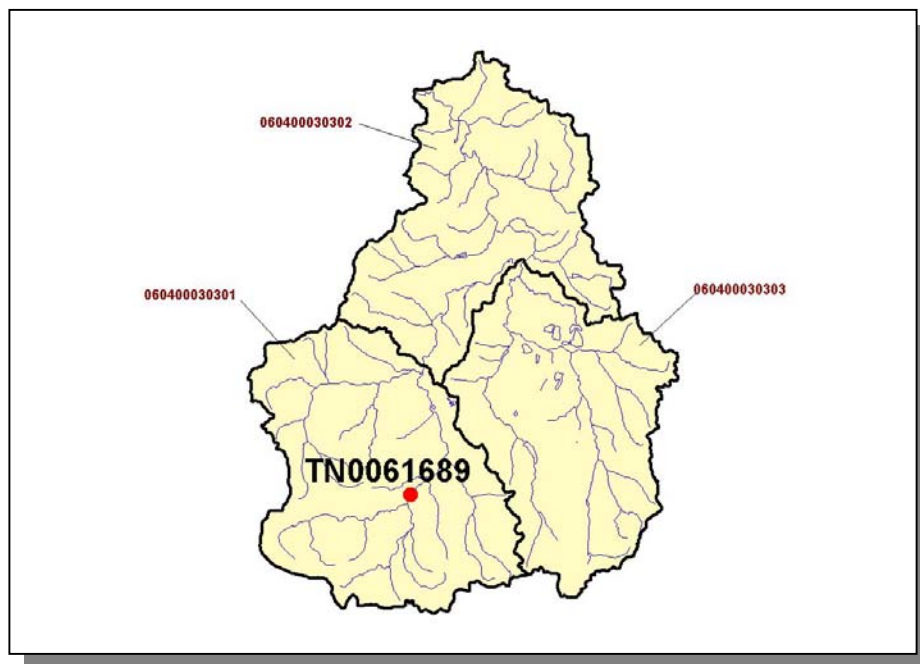


Figure 4-35. Location of Water Treatment Plants in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

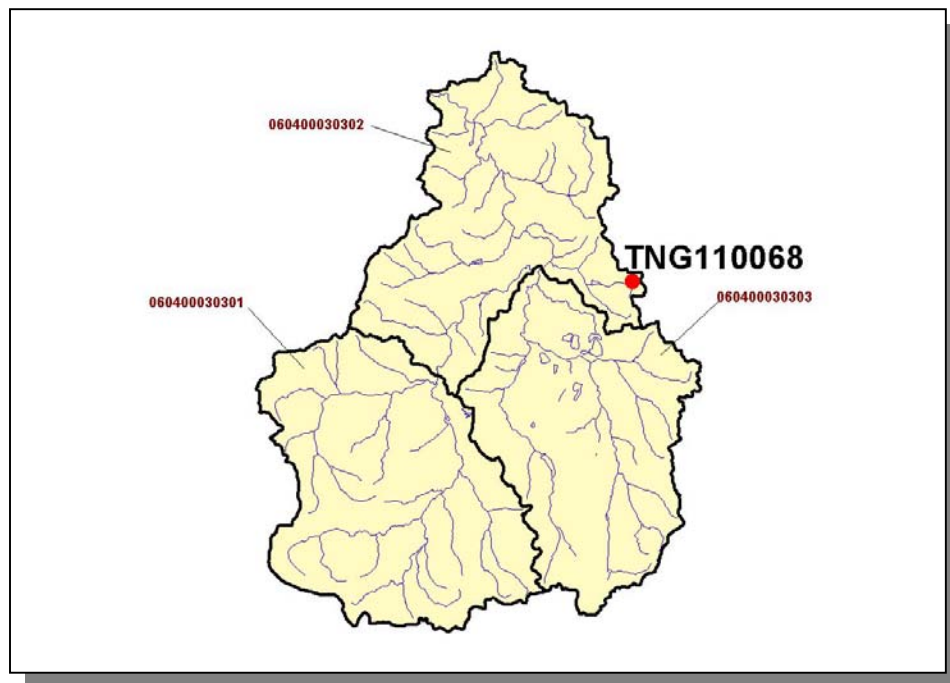


Figure 4-36. Location of Ready Mix Concrete Plants in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

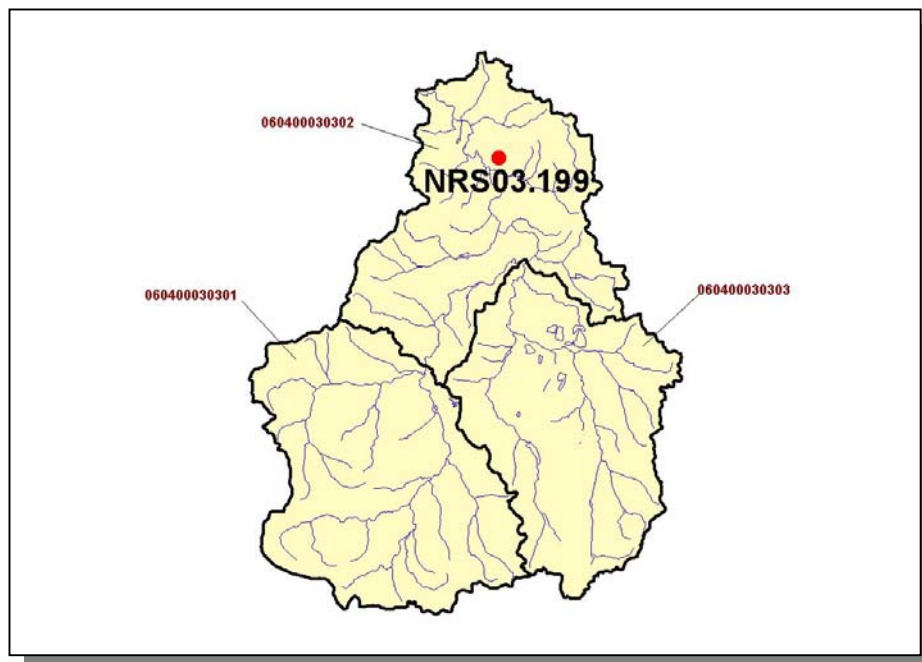


Figure 4-37. Location of ARAP Sites (Individual Permits) in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

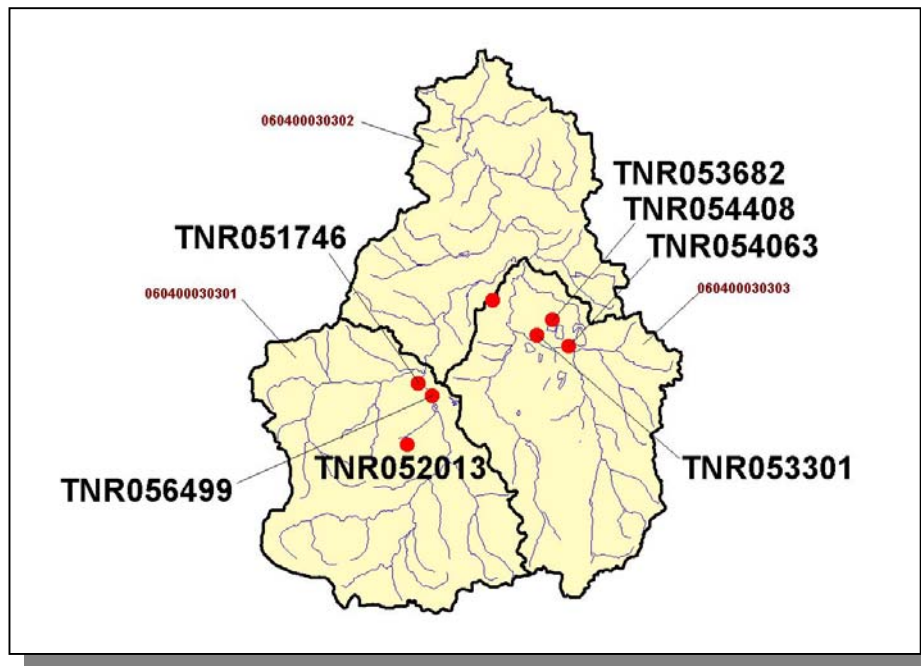


Figure 4-38. Location of TMSF Facilities in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

4.2.C.ii.a. Dischargers to Water Bodies Listed on the 2002 303(d) List

There are two NPDES facilities discharging to water bodies listed on the 2002 303(d) list in Subwatershed 0604000303:

- TN0020800 (Mount Pleasant STP) discharges to Sugar Fork Creek @ RM 1.9
- TN0067415 (CYTEC Industries) discharges to Big Bigby Creek @ RM 15.1, 15.4, and 15.6

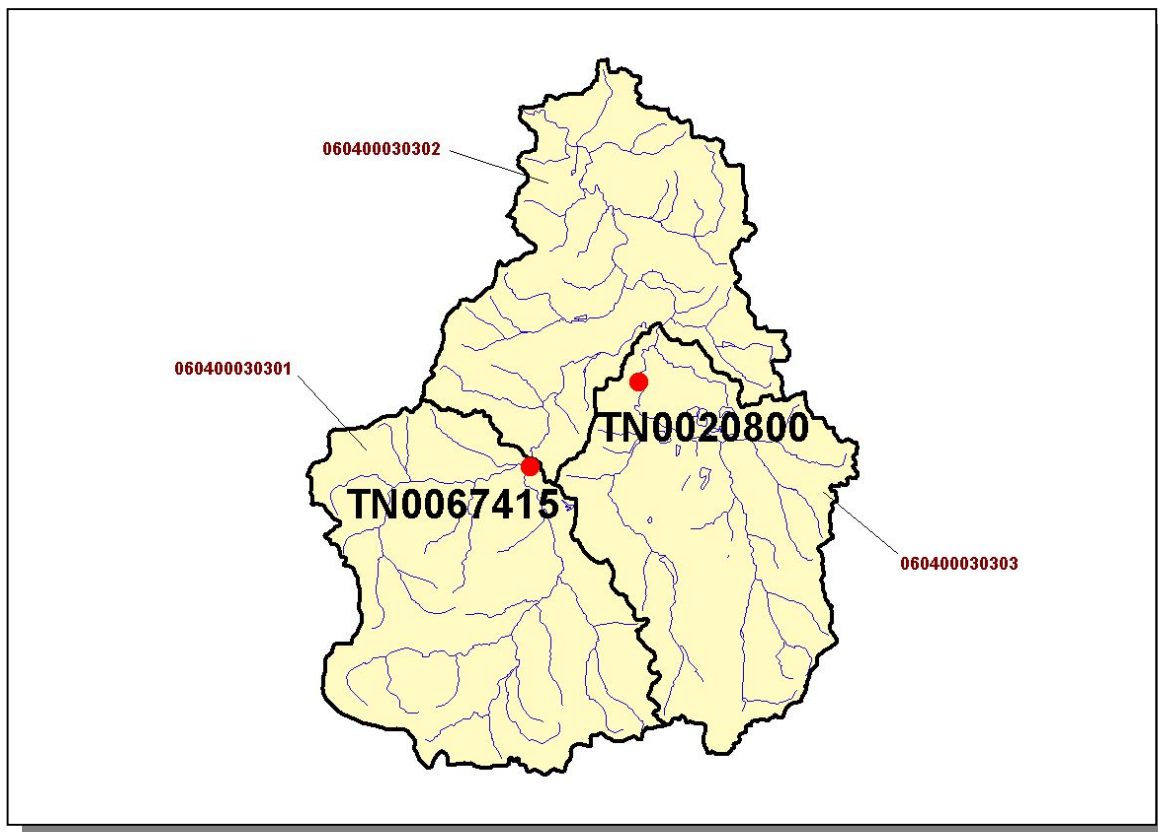


Figure 4-39. Location of NPDES Dischargers to Water Bodies Listed on the 2002 303(d) List in Subwatershed 0604000303. Subwatershed, 060400030301, 060400030302, and 060400030303 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0020800	0.34	0.36	0.40	0.28	0.71
TN0067415	3.9	4.1	4.3	3.2	

Table 4-13. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000303. Data are in million gallons per day (MGD). Data were obtained from the USGS publication *Flow Duration and Low Flows of Tennessee Streams Through 1992* or from permit files.

PERMIT #	WET	CBOD ₅	FECAL COLIFORM	E. COLI	NH ₃	TRC	TSS	SETTLEABLE SOLIDS	CN	DO	pH
TN0020800	X	X	X	X	X	X	X	X	X	X	X
TN0067415	X	X					X		X		X

Table 4-14. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000303. WET, Whole Effluent Toxicity; CBOD₅, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	Pb	Cu	Ni	Zn	Cr
TN0020800	X	X	X		
TN0067415	X	X	X	X	X

Table 4-15. Metals Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000303.

PERMIT #	NITROBENZENE	PHENOL	TOLUENE	TRICHLOROETHYLENE
TN0067415	X	X	X	X

Table 4-16. Organic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000303.

4.2.C.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
6,334	12,977	609	17	<5	519	73

Table 4-17. Summary of Livestock Count Estimates in Subwatershed 0604000303.
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Giles	171.8	171.8	3.3	11.4
Lawrence	199.8	199.8	6.6	27.1
Lewis	158.0	158.0	4.0	10.2
Totals	529.6	529.6	13.9	48.7

Table 4-18. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0604000303.

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.78
Grass (Hayland)	0.30
Legumes, Grass (Hayland)	0.30
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Forest Land (Not Grazed)	0.00
Forest Land (Grazed)	0.00
Corn (Row Crops)	4.71
Cotton (Row Crops)	8.07
Soybeans (Row Crops)	9.10
All Other Row Crops	11.27
Barley (Close-Grown Cropland)	1.08
Wheat (Close-Grown Cropland)	10.82
All Other Close-Grown Cropland	1.80
Summer Fallow (Other Cropland)	0.35
Other Cropland not Planted	4.32
Other Vegetable and Truck Crop	4.29
Conservation Reserve Program Lands	0.46
Non-Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.69

Table 4-19. Annual Estimated Total Soil Loss in Subwatershed 0604000303.